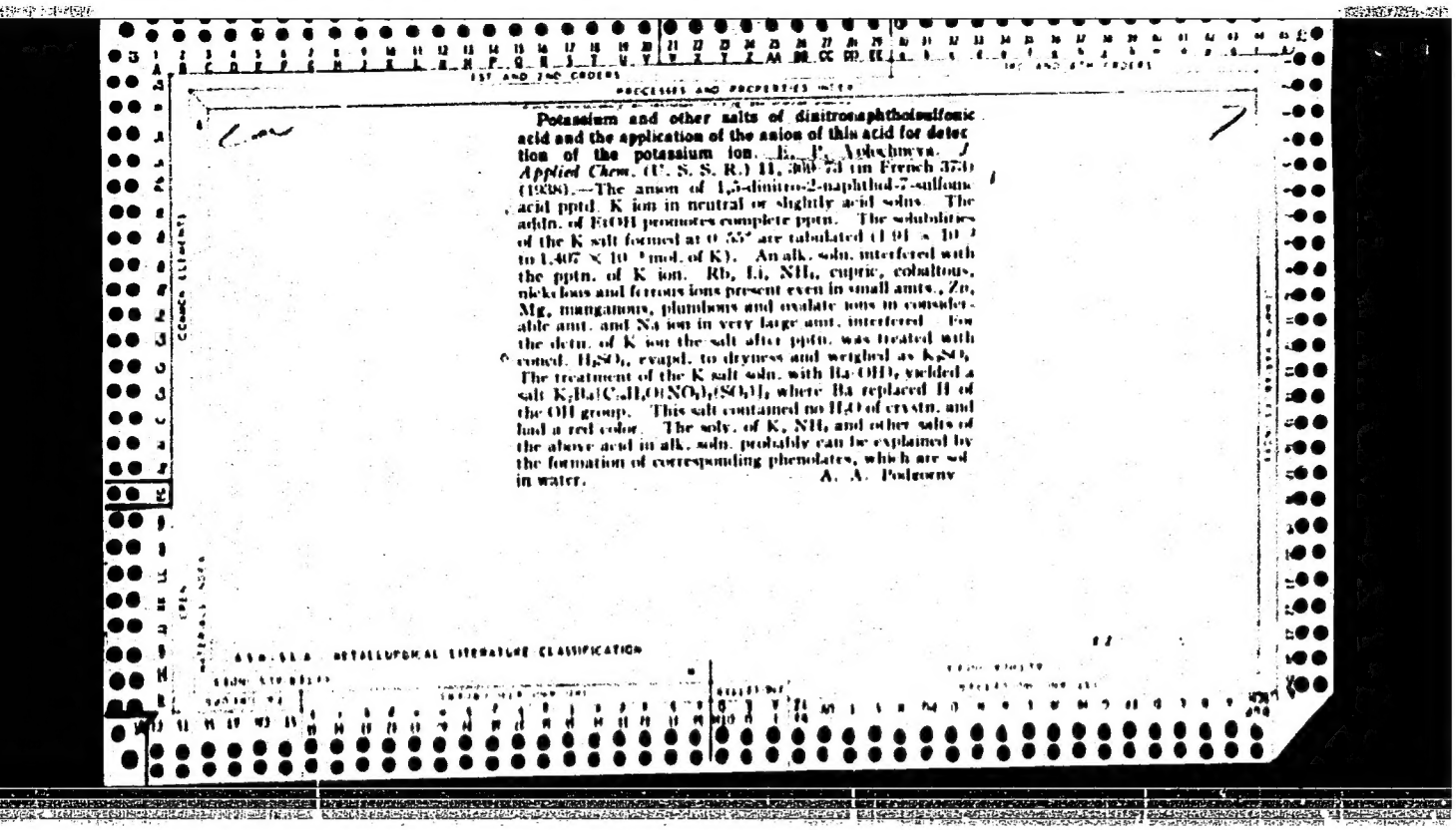
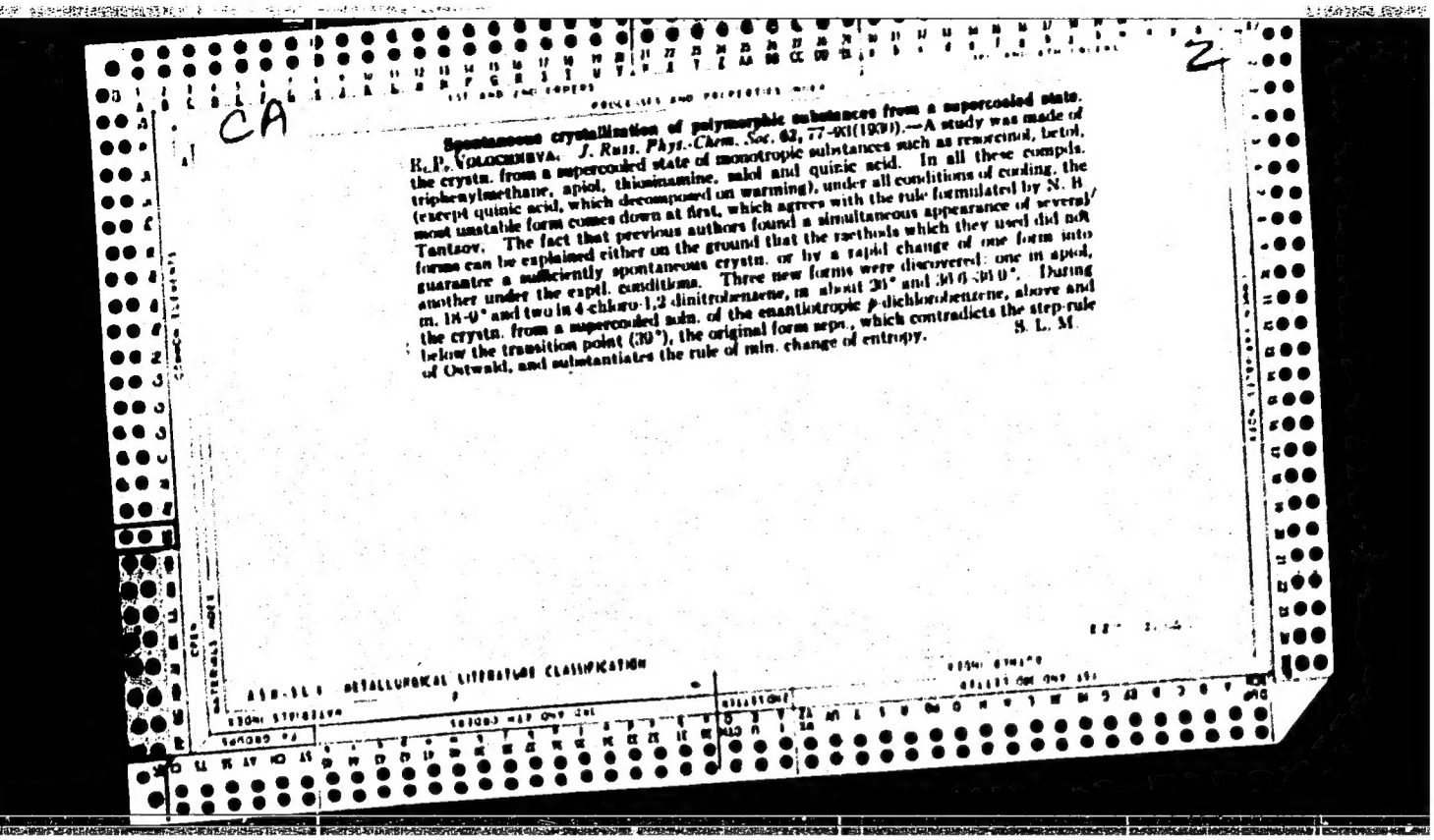


Potassium and other salts of dinitronaphtholsulfonic acid and the application of the anion of this acid for detection of the potassium ion. L. P. Adelchiyeva. *J Applied Chem.* (U. S. S. R.) 11, 500-7 (in French 375) (1938).—The anion of 1,5-dinitro-2-naphthol-7-sulfonic acid pptd. K ion in neutral or slightly acid solns. The addn. of EtOH promotes complete ppth. The solubilities of the K salt formed at 0-55° are tabulated (1.91 × 10⁻² to 1.407 × 10⁻³ mol. of K). An alk. soln. interfered with the ppth. of K ion. Rb, Li, NH_4, cupric, cobaltous, nickelous and ferrous ions present even in small amts., Zn, Mg, manganous, plumbous and oxalate ions in considerable amt. and Na ion in very large amt. interfered. For the detn. of K ion the salt after ppth. was treated with concd. H_2SO_4, evapd. to dryness and weighed as K_2SO_4. The treatment of the K salt soln. with Ba(OH)$_2$ yielded a salt $K_2Ba[C_{10}H_4(OH)(NO_2)_2(SO_3)]_2$ where Ba replaced H of the OH group. This salt contained no H_2O of crystn. and had a red color. The solv. of K, NH_4 and other salts of the above acid in alk. soln. probably can be explained by the formation of corresponding phenolates, which are sol in water.

A. A. Podgorny

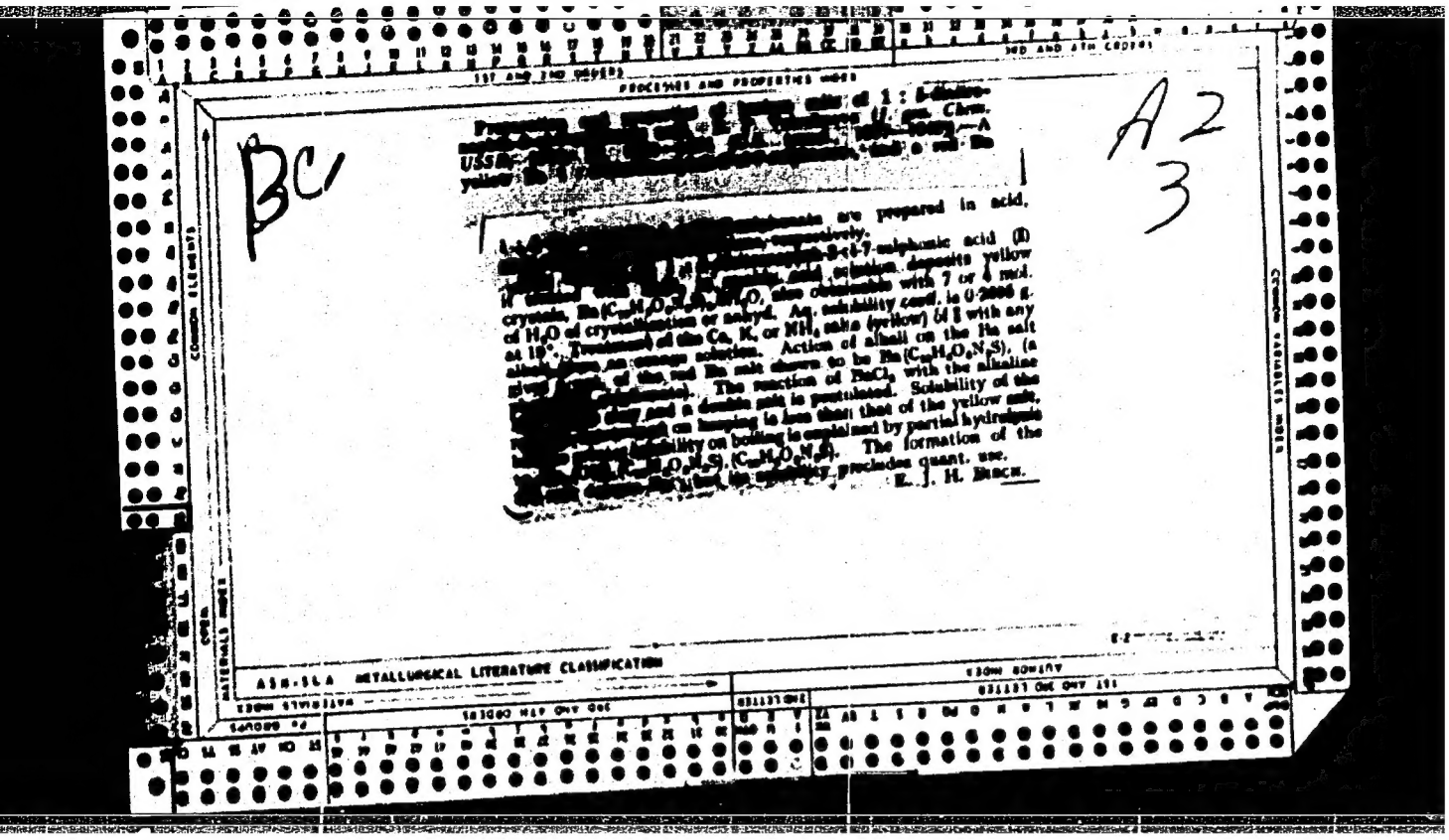


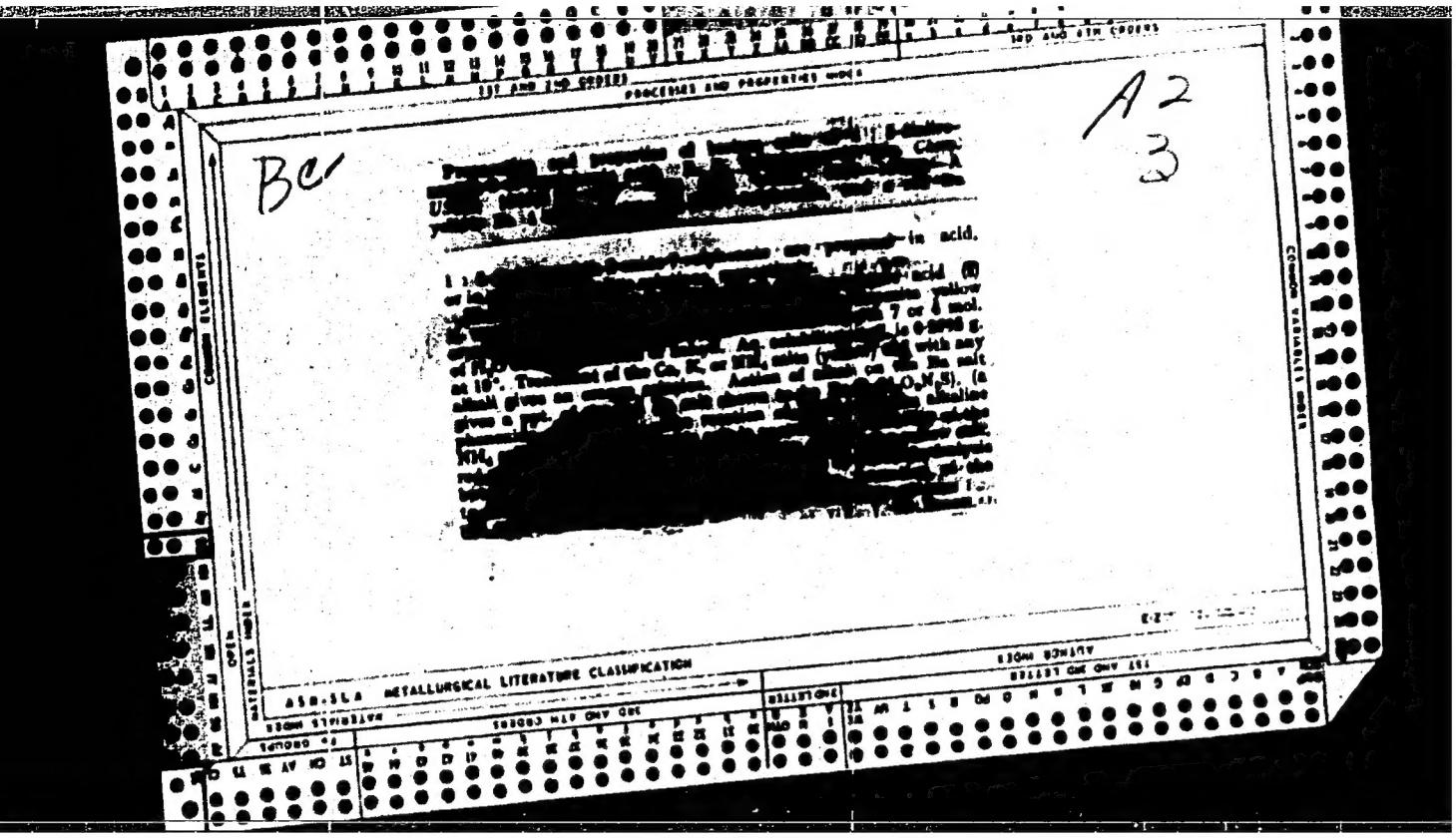
CA

2

Spontaneous crystallization of polymorphic substances from a supercooled state. K. P. Volochinova. *J. Russ. Phys.-Chem. Soc.* 62, 77–93(1930).—A study was made of the crystn. from a supercooled state of monotropic substances such as resorcinol, betol, triphenylurethane, apiol, thiosinamine, salol and quinic acid. In all these compds. (except quinic acid, which decomposed on warming), under all conditions of cooling, the most unstable form comes down at first, which agrees with the rule formulated by N. S. Tantsov. The fact that previous authors found a simultaneous appearance of several forms can be explained either on the ground that the methods which they used did not guarantee a sufficiently spontaneous crystn. or by a rapid change of one form into another under the exptl. conditions. Three new forms were discovered: one in apiol, m. 18–9° and two in 4-chloro-1,3-dinitrobenzene, in about 28° and 50.6–51.0°. During the crystn. from a supercooled soln. of the enantiotropic *p*-dichlorobenzene, above and below the transition point (39°), the original form separ., which contradicts the step-rule of Ostwald, and substantiates the rule of min. change of entropy. S. L. M.

A10-51 METALLURGICAL LITERATURE CLASSIFICATION

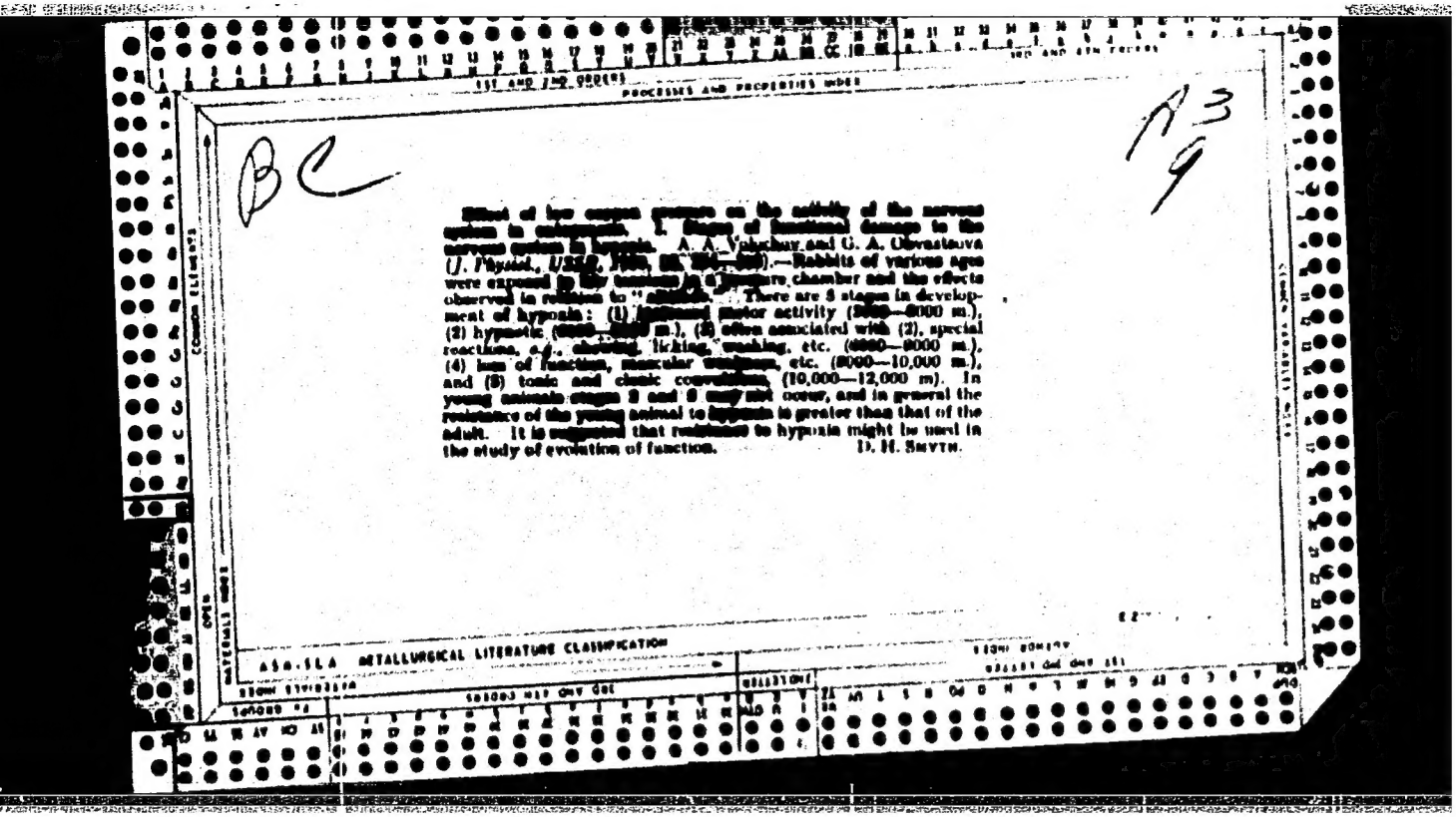




VOLOCHNEVA, E. P.

"Preparation and properties of the barium salts of dinitro-(1,5)-beta-naphtholsulfo acid-(2,7)". Volochneva, E. P. (p. 1529)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii) 1949, Vol. 19, No. 8.



BC

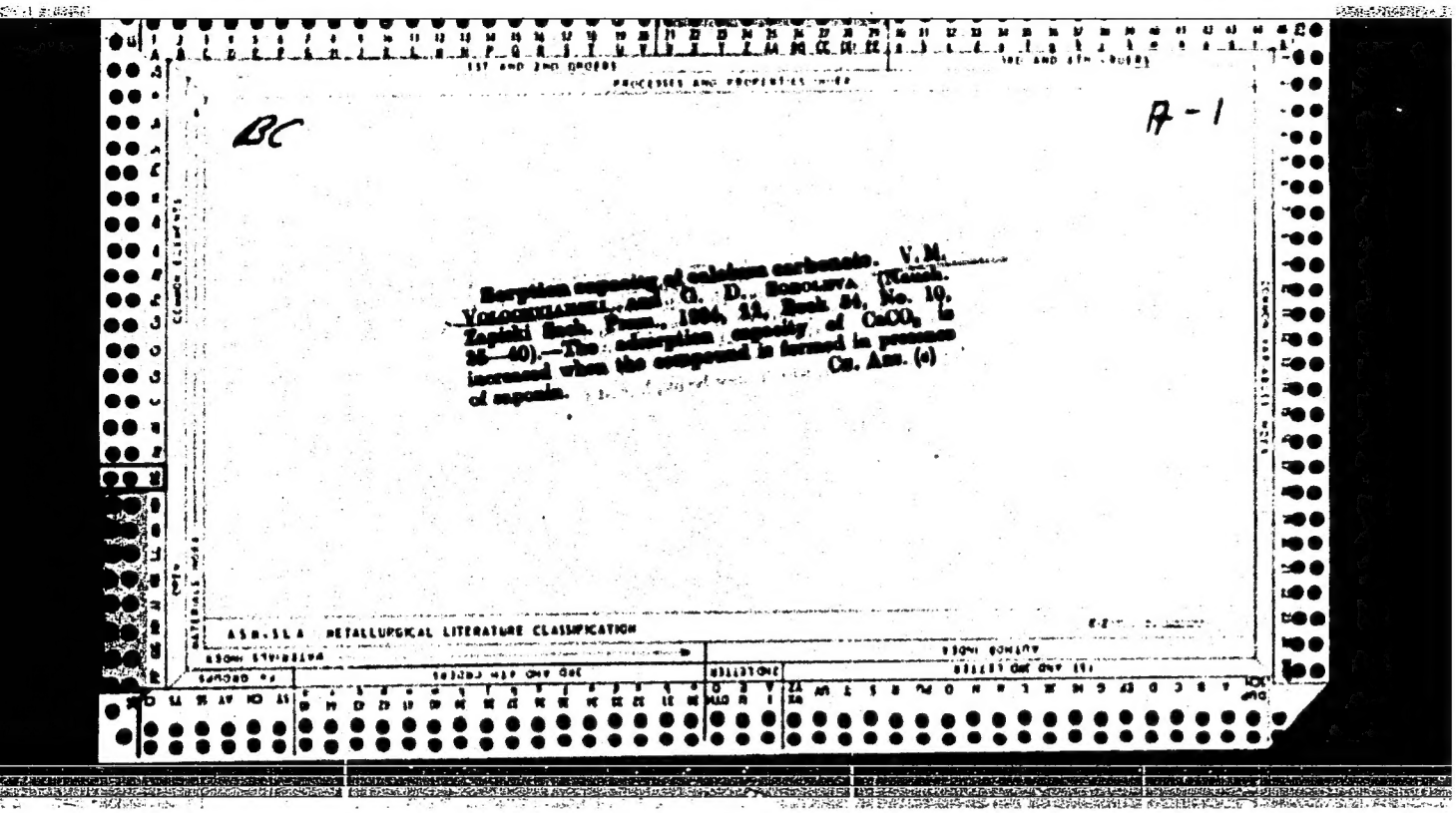
A3
9

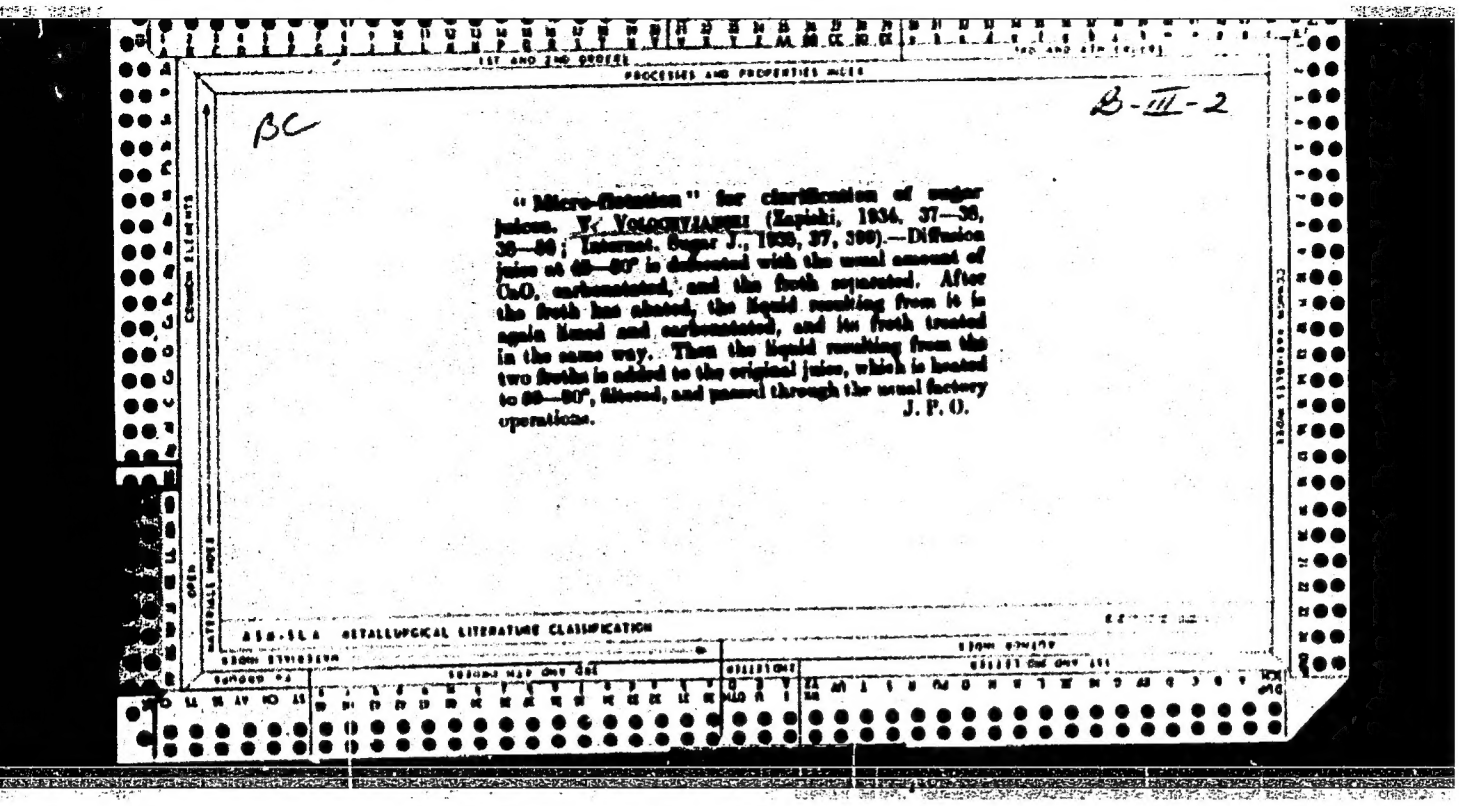
Effect of low oxygen pressure on the activity of the nervous system in ontogenesis. I. Stages of functional damage to the nervous system in hypoxia. A. A. Yakushev and G. A. Obrastsova (*J. Physiol., USSR*, 1956, [illegible]).—Rabbits of various ages were exposed in the laboratory in a pressure chamber and the effects observed in relation to "altitude." There are 5 stages in development of hypoxia: (1) increased motor activity (3000—6000 m.), (2) hypnotic ([illegible] m.), (3) often associated with (2), special reactions, e.g., chewing, licking, washing, etc. (6000—9000 m.), (4) loss of function, muscular twitchings, etc. (8000—10,000 m.), and (5) tonic and clonic convulsions (10,000—12,000 m). In young animals stages 3 and 5 may not occur, and in general the resistance of the young animal to hypoxia is greater than that of the adult. It is suggested that resistance to hypoxia might be used in the study of evolution of function. D. H. Smyth.

Volochueva, K. P.

Preparation and properties of barium salts of 1,5-dinitro-2-naphthol-7-sulfonic acid. K. P. Volochueva. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 1951–61(1949).—The yellow Ba salt of 1,5-dinitro-2-naphthol-7-sulfonic acid forms in neutral and weakly acid solns.; its compn. is $[C_{10}H_4(OH)(NO_2)_2SO_3]_2Ba$ and it forms *tetra-*, *hexa-* and *heptahydrates*; its soly. is 0.2695 g./100 ml. H_2O at 10°. The red salt forms from the alk. solns. of the yellow salt on addn. of $BaCl_2$ with addn. of any alkali; it is also obtained by addn. of NH_4OH to the yellow salt; the red salt is $Ba[OC_{10}H_4(NO_2)_2SO_3]$ or $Ba_3[OC_{10}H_4(NO_2)_2SO_3]_2$, does not form hydrates, and its soly. in H_2O is 0.033 g. at 17°; it cannot be heated in H_2C_2 as the products of hydrolysis are more sol. than the salt itself. The formation of the red salt from the yellow NH_4 salt appears to proceed by intermediate formation of a mixed Ba-NH_4 salt and goes slowly. Although the *red salt may be used* for the *detection* of *Ba*, its soly. is higher than that of $BaSO_4$ and its usefulness is limited. G. M. K.

10-5-54



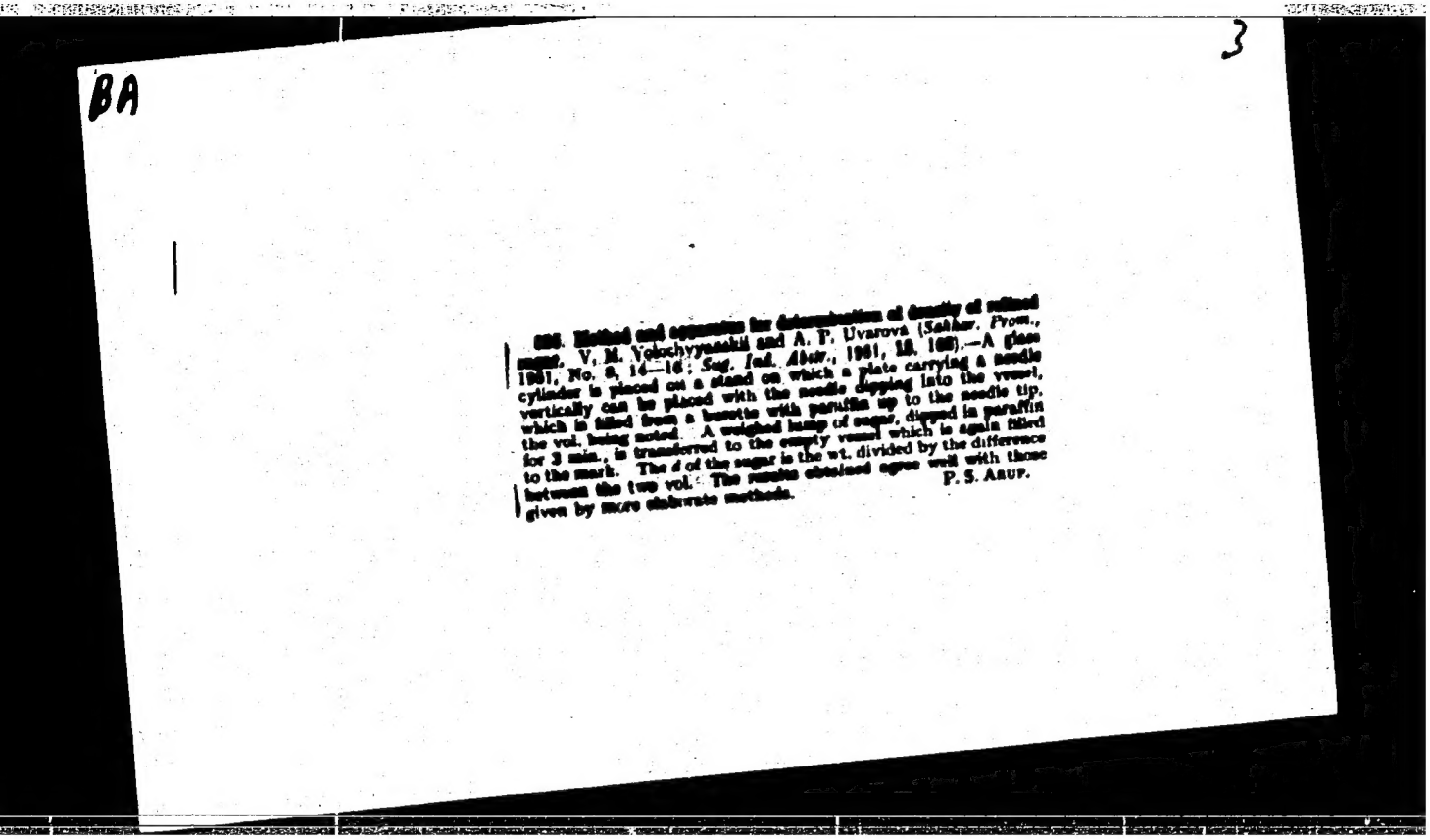


BC

B-III-2

"Micro-flotation" for clarification of sugar juices. V. VOLOSHYANSKII (Zapiski, 1934, 37—38, 38—39; Internat. Sugar J., 1938, 37, 389).—Diffusion juice at 85—90° is defecated with the usual amount of CaO, carbonatated, and the froth separated. After the froth has cleared, the liquid resulting from it is again limed and carbonatated, and the froth treated in the same way. Then the liquid resulting from the two froths is added to the original juice, which is heated to 80—90°, filtered, and passed through the usual factory operations.

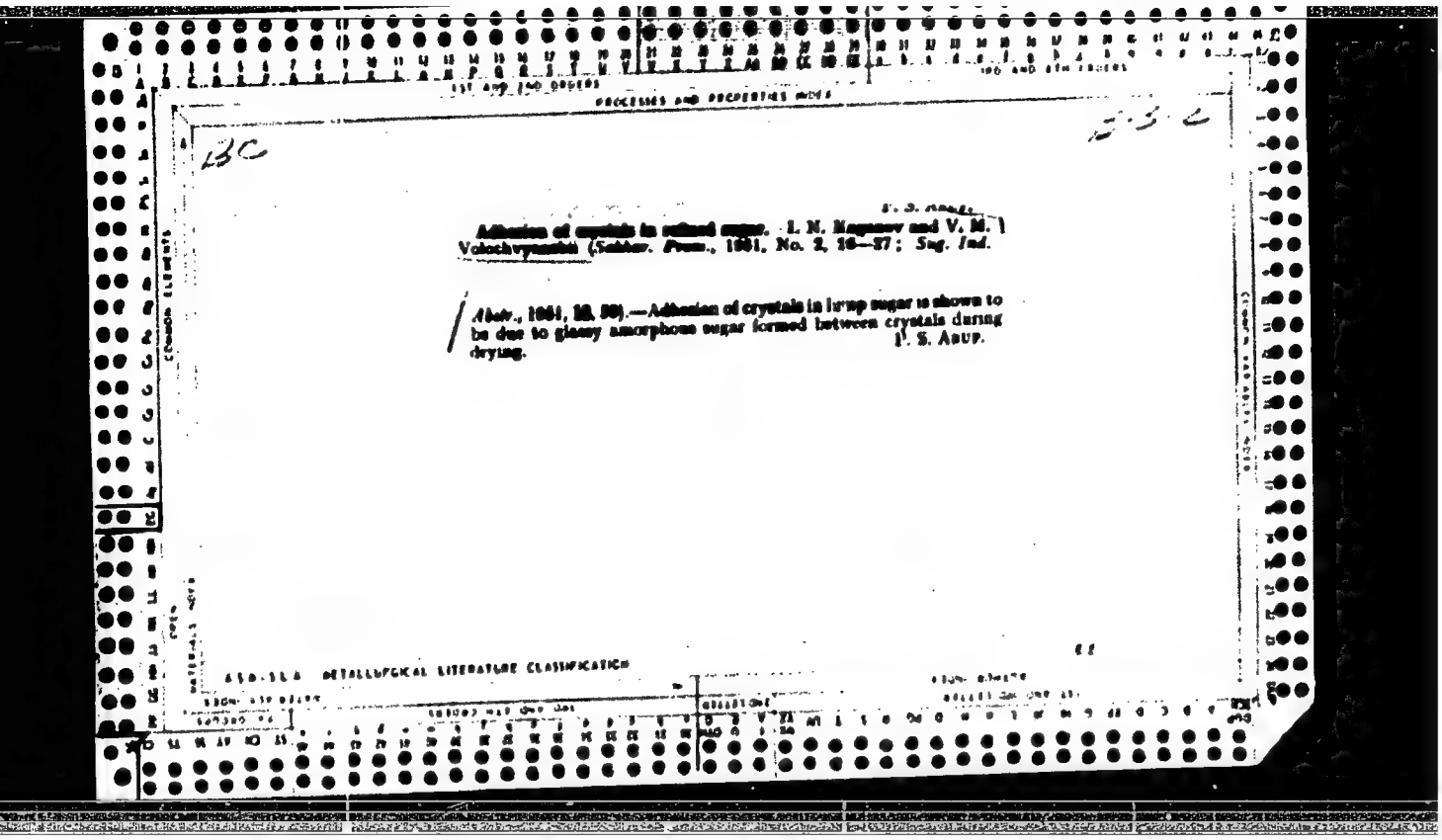
J. P. O.



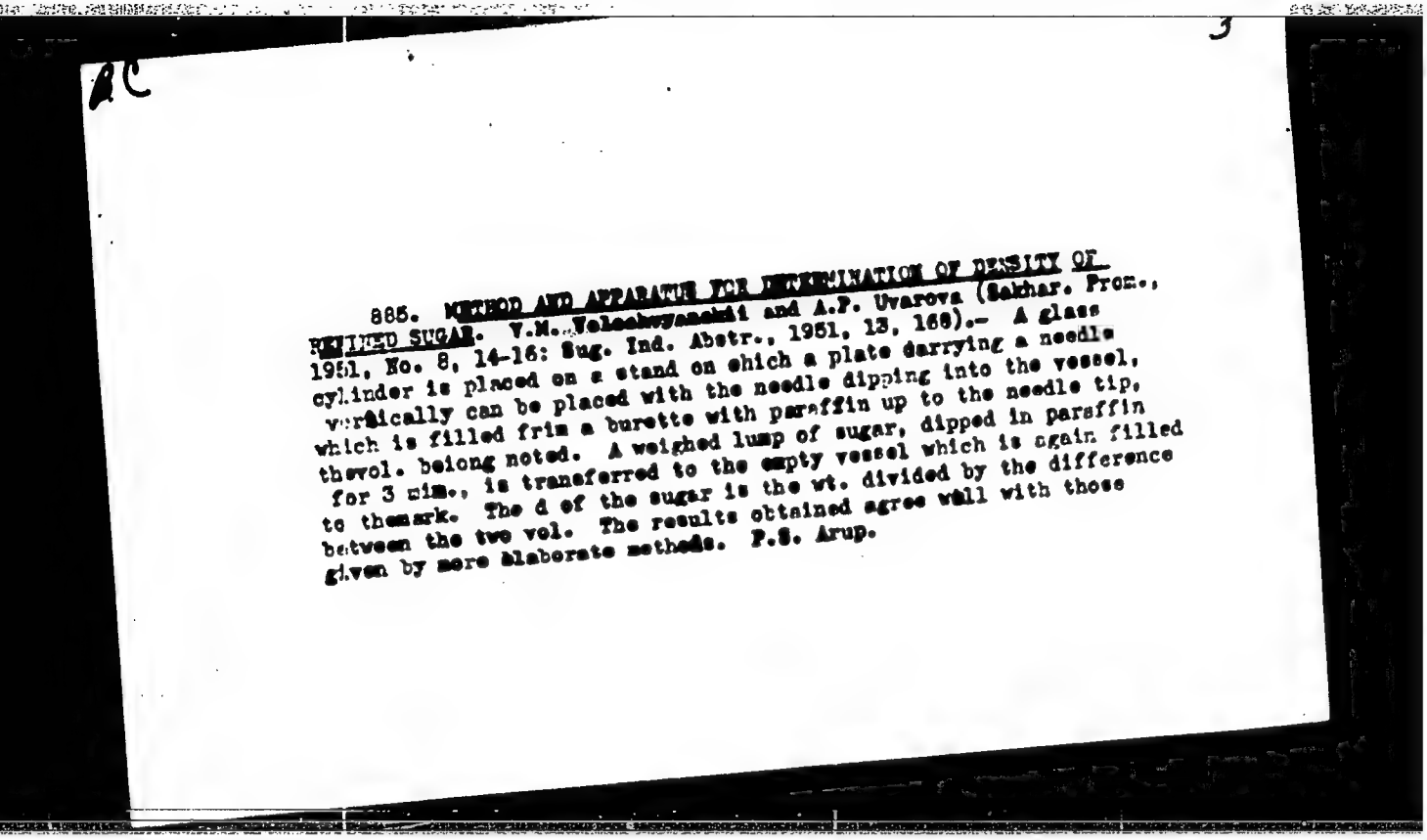
BA

3

[illegible]. Method and apparatus for determination of density of refined sugar. V. M. Yolochyyanskii and A. P. Uvarova (Sakhar. Prom., 1961, No. 8, 14—16; *Sug. Ind. Abstr.*, 1961, 13, 168).—A glass cylinder is placed on a stand on which a plate carrying a needle vertically can be placed with the needle dipping into the vessel, which is filled from a burette with paraffin up to the needle tip, the vol. being noted. A weighed lump of sugar, dipped in paraffin for 3 min., is transferred to the empty vessel which is again filled to the mark. The *d* of the sugar is the wt. divided by the difference between the two vol. The results obtained agree well with those given by more elaborate methods. P. S. Arup.



Adhesion of crystals in refined sugar. I. N. Maganov and V. M. Volochuyenko (Sakhar. Prom., 1951, No. 2, 26—27; Sug. Ind. Abstr., 1951, 13, 59).—Adhesion of crystals in syrup sugar is shown to be due to glassy amorphous sugar formed between crystals during drying. I. S. Abup.



885. METHOD AND APPARATUS FOR DETERMINATION OF DENSITY OF REFINED SUGAR. V.M. Velechovyanskii and A.P. Uvarova (Sakhar. Prom., 1951, No. 8, 14-16: Sug. Ind. Abstr., 1951, 13, 168).- A glass cylinder is placed on a stand on which a plate carrying a needle vertically can be placed with the needle dipping into the vessel, which is filled frim a burette with paraffin up to the needle tip, thevol. beiong noted. A weighed lump of sugar, dipped in paraffin for 3 min., is transferred to the empty vessel which is again filled to themark. The d of the sugar is the wt. divided by the difference between the two vol. The results obtained agree well with those given by more elaborate methods. P.S. Arup.

VOLODARS'KA, D.M., GOROKHOVS'KYY, M.E.; KONDRAT'YEV, S.F.; PRAKHOV, M.M.; KOVPANENKO, T.M.; SUKHENKO, Ye.K.; LYASHEVS'KA, V.F.; ZHEL'NIO, T.M.; KHIVRICH, G.K.; GEORGIYEVSKYY, M.I.; MAYVEL'T, E.M.; DENISENKO, L., veduchiy redaktor; PATSALYUK, P., tekhnichniy redaktor

[Hints for everyday living] Pobutovi porady; Vyd. 3-ie, vypr. i dop. Kyiv, Derzh. vyd-vo tekhn.lit-ry URSR, 1957. 184 p. (MIRA 10:8)
(Home economics)

ACC NR: AP7001747 (A) SOURCE CODE: UR/0193/66/000/010/0014/0017

AUTHOR: Fel'dman, D. I.; Geyman, Yu. P.; Volodarskiy, I. A.

ORG: none

TITLE: DEZ graphite plastic antifriction material

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 10, 1966, 14-17

TOPIC TAGS: antifriction material, antifriction bearing, graphite, heat resistance, wear resistance, resin

ABSTRACT: Dnepr Electrode Plant (DEZ) And Zaporozhe Transformer Plant (ZTZ) have developed a new antifriction pressed material called DEZ graphite plastic, made of artificial (electrode) graphite and Bakelite lacquer. Bearings of any size may be shaped with this material in hydraulic presses for plastics by using closed molds heated to 130°C and stepped up to 150°C under pressures of 200 to 350 kg/cm^2, graduated according to the size of the bearing. Heat treatment is prescribed for DEZ bearings which must operate under temperatures of 120--130°C and of 250°C; tables give physical properties and loss of weight under heat treatment, also volumetric compression of DEZ bushings under various pressures. DEZ bearings may be used at high or low temperatures without further lubricants, and prevent wear in steel journals. If used in gear boxes with a flood lubricant, they reduce the friction coefficient to that of the best babbitt metal. When running in new DEZ bearings they show some wear and

Card 1/2 UDC: 621.775.74

ACC NR: AP7001747

heat until a film of graphite cyrstals is formed; their friction coefficient in this period should not exceed 0.1 or 0.11 and later drops to 0.04 or 0.06. They function well in pairs on chrome steel shafts whose hardness exceeds RC 45, but not well on bronze or aluminum alloys. Without lubrication they resist wear up to loads of 25 to 30 kg/cm^2, but wear and friction coefficients rise under heavier loading. They are particularly efficient in long coal or ore conveyors, in belt conveyors in cement and coke chemical works, automotive assembly lines, and metallurgical roll tables. They are applicable in machinery operating at low temperatures, also in textile, paper-making, printing, and food processing machinery where oil lubricants may damage the product. Orig. art. has: 1 formula and 5 tables.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

VOLODIN, A.G.

Age of granites in the Mustag and Sarlyk plutons of Gornaya Shorya. Trudy Gor.-geol.inst.zap.-Sib.fil.AN SSSR no.17: 53-56 '56. (MIRA 13:5)
(Gornaya Shorya--Granite)

VOLODINA, V.

"Tell us more about specific instances..." Okhr.truda i sots.strakh. no.12:69 D '59. (MIRA 13:4)

1. Spetsial'nyy korrespondent zhurnala "Okhrana truda i sotsial'noye strakhovaniye".
(Insurance, Social—Periodicals)

STOLYAROV, G.V.; VOLODARSKAYA, L.I.

Psychic disorders in caffeine poisoning. Zhur. nevr. i psikh. 62 no.3:417-421 '62. (MIRA 15:3)

1. Kafedra psikhiatrii (zav. - dotsent G.V. Stolyarov) Chitinskogo meditsinskogo instituta i Chitinskaya oblastnaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach L.I. Volodarskaya).

(CAFFEINE--TOXICOLOGY)
(PSYCHOSES)

VOLODARSKAYA, P.

Movement of socialist labor brigades in the Czechoslovak Socialist Republic. Biul. nauch. inform.: trud i zar. plata 4 no.9:64-67 '61. (MIRA 15:1)

(Czechoslovakia--Socialist competition)

VOLODARSKAYA, R.S.

5(2) PHASE I BOOK EXPLOITATION SOV/3224

Mukhina, Zinaida Stepanovna, Yekaterina Ivanovna Nikitina, Lidiya Mitrofanovna Budanova, Raisa Samuilovna Volodarskaya, Lyudmila Yakovlevna Polyak, and Anna Aleksandrovna Tikhonova

Metody analiza metallov i splavov (Methods of Analysis of Metals and Alloys) Moscow, Oborongiz, 1959. 527 p. Errata slip inserted. 8,050 copies printed.

Ed. of Publishing House: T. M. Kunyavskaya; Tech. Ed.: V. P. Rozhin.

PURPOSE: This book is intended for laboratory technicians of plants and may also be of use to personnel of chemical and analytic laboratories of scientific institutions and schools of higher education.

COVERAGE: The book reviews various methods of analyzing steel, cast iron, complex iron, chromium-, nickel- and cobalt-base alloys. It also reviews methods of determining the content of elements in aluminum, magnesium and copper alloys as well as in various binary alloys. Principles of physical and chemical analysis for

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metallurgical studies are briefly explained, and laboratory equipment used for this kind of analysis is described and illustrated. Methods of analysis are grouped according to the type of alloy being analyzed. Each method is described and its accuracy, theoretical basis and procedure are indicated. The application of chromatographic separation in analyzing various metal alloys is explained. The appendix contains the description of various titration solutions, the reactivation of solutions and tables indicating weights of substances used in acidimetry as well as certain oxidizers, reducing agents, conversion coefficients, atomic weights of elements, etc. V. Ye. Bukhtiarov and D. V. Romanov wrote the part entitled "Methods of Chromatographic Analysis". There are 118 references: 108 Soviet, 4 German, 3 English 2 Czech and 1 French.

TABLE OF CONTENTS:

Methods of Analysis of Metals and Alloys SOV/3224

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Methods of Analysis of Metals and Alloys SOV/3224

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Methods of Analysis of Metals and Alloys SOV/3224

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AVAILABLE: Library of Congress

Card 14/14

TM/bg
3-22-60

S/032/63/029/001/005/022
B101/B186

AUTHORS: Volodarskaya, R. S., and Derevyanko, G. N.

TITLE: Complexometric determination of zirconium and thorium by xylenol orange

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 1, 1963, 28 - 29

TEXT: Zr is determined in magnesium, aluminum, or copper alloys by titration with Trilon B in 0.25 - 1 N hydrochloric or sulfuric acid solution, xylenol orange serving as indicator. The interfering Fe(III) and Ce(IV) are reduced with hydroxylamine hydrochloride. Ascorbic acid as reducing agent gives no satisfactory results, by reason of complex formations. After titration of Zr, thorium can be titrated at pH = 1.5 - 2.5 with Trilon B and xylenol orange as indicator. Zr does not disturb the titration of Th after it had been bound by Trilon B. The method allows of determining 0.1 % Zr and Th in alloys. There are 2 tables.

Card 1/1

Volodarskaya R. S.

AUTHORS Budanova L.M., Volodarskaya R.S., 32-7-8/49

TITLE The Trilonometrical Determination of Magnesium in Aluminum Alloys. (Trilonometricheskoye opredeleniye magniya v alyuminiyevykh splavakh -Russian)

PERIODICAL Zavodskaya Laboratoriya, 1957, Vol 23, Nr 7, pp 797-797 (U.S.S.R.)

ABSTRACT This determination can be carried out by trilon-titration after the removal of disturbing components. On this occasion zinc and aluminum are separated by alkalis, whereas copper, nickel, manganese, and iron are separated by sodium-diethyldithiocarbonate. If the alloy contains 0,5% magnesium, no nickel, and if its manganese content is less than 0,5% a buffer mixture may be used instead of the former, and it is possible to separate the magnesium from the elements disturbing titration. Carrying out of the analysis is described. There is 1 figure.

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VOLODARSKAYA, R.S.

Rapid methods for determining antimony in bronzes. Zav.lab. 25 no.2: 143-144 '59. (MIRA 12:3)
(Antimony--Analysis) (Bronze)

5(2) SOV/32-25-2-7/78

AUTHOR: Volodarskaya, R. S.

TITLE: Fast Methods of Determining Antimony in Bronzes (Bystryye metody opredeleniya sur'my v bronzakh)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, pp 143-144 (USSR)

ABSTRACT: The author investigated the possibility of determining quantitatively antimony as iodide or thiourea complex in the presence of copper. It was found that 2 ml of 10 % thiourea suffice to transform 0.01 g copper into the colorless complex compound. An increase in the concentration of potassium iodide and the sulfuric acid in the sblution results under stable conditions, (in the absence of copper) in an increase of the optical density (Figs 1,2). If both antimony and copper are present, the solution is colored yellowish. The coloring becomes as more intensive as more thiourea is added; the maximum optical density is reached at the addition of 50-60 ml thiourea solution. It was observed, however, that the iodide-antimony complex compound is more sensitive (5.10^{-7} g/ml) than the thiourea-antimony compound, so that smaller quantities can be used (0.01 g instead of 0.1 g).

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Fast Methods of Determining Antimony in Bronzes SOV/32-25-2-7/78

Furthermore, the iodide-antimony compound is more stable. Two photocolorimetric methods based on the investigations carried out are described: the iodide method and the thiourea method. There are 2 figures, 1 table, and 3 Soviet references.

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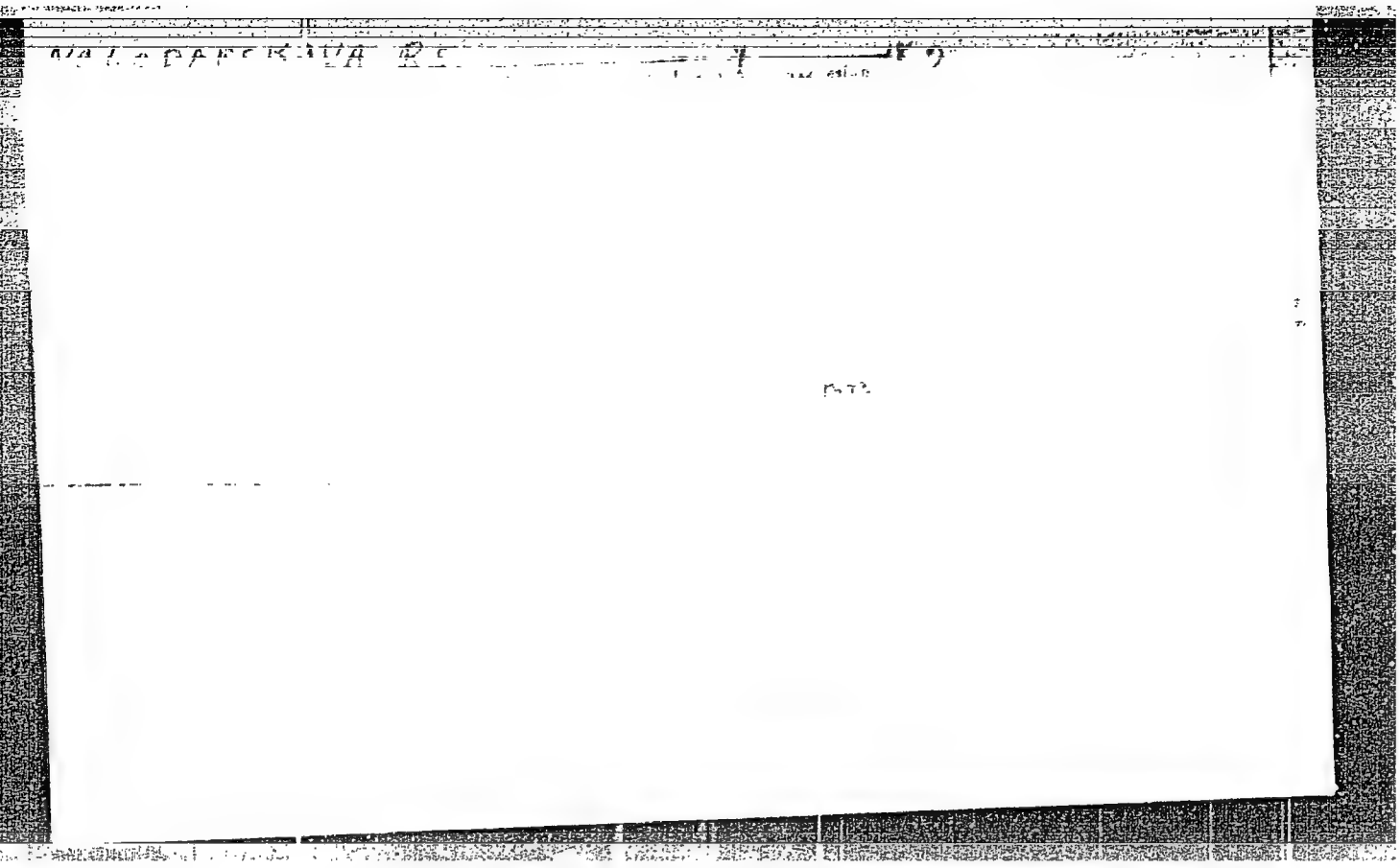

VOLODARSKAYA, R.S.

BUDANOVA, L.M.; VOLODARSKAYA, R.S.

Trilonometric determination of magnesium in aluminum alloys. (MLRA 10:8)
Zav.lab. 23 no.7:797 '57.
(Aluminum alloys) (Magnesium)

S/032/63/029/002/005/028
B101/B186

AUTHORS: Volodarskaya, R. S., and Derevyanko, G. N.

TITLE: Colorimetric determination of scandium with xylenol orange

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 2, 1963, 148-149

TEXT: Scandium with xylenol orange forms a red-violet complex at pH 1.5 - 5.0. This allows a colorimetric determination of Sc at pH = 1.5 without preliminary separation of the alkaline-earth and rare-earth elements, and of Y, Zn, Cd, Al, Mn, and Fe(II). Zr, Th, In, Bi, and Fe(III) disturb the reaction. Fe(III) and Ce(IV) are reduced by ascorbic acid, Zr is precipitated with excess phenyl arsonic acid. The colorimetric determination is made using a green light filter and a calibration curve. The method allows the determination of Sc in magnesium metal or magnesium alloys within 25-30 min. There are 1 figure and 2 tables.

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S/032/60/026/008/013/046/XX
B020/B052

AUTHOR: Volodarskaya, R. S.

TITLE: Complexometric Method of Determining Thorium and Zirconium in Magnesium Alloys

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 8, pp. 925-927

TEXT: Arsenazo which is used for the colorimetric determination of Th, Zr, Be, B, Cu, etc. was found to be suited best as indicator for the complexometric determination of thorium. Thorium and arsenazo form a colored complex which is stable also in acid solutions, and which does not form complexes with Mg, Zn, Cd, Mn, Ca, and rare earths. One molecule of Trilon B forms a complex with one molecule of Th. Magnesium alloys containing up to 4% of Th and 1% of Zr (Table 1), were analyzed by this indicator. Larger quantities of Mg, Zn, Al, Mn, Cd, Ce^{3+}, Nd, Pr, La do not affect the thorium titration. The color transition is not affected by a content of up to 0.02% of Cu, 0.5% of Ni, and 0.1% of Pb. Before the titration Ce^{4+} must be reduced by ascorbic acid. Zr interferes and cannot be masked by additions of citric and tartaric acids, since at the same

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Complexometric Method of Determining Thorium and Zirconium in Magnesium Alloys

S/032/60/026/008/013/046/XX
B020/B052

time thorium also forms a complex. The precipitation of Zr by the five-fold amount of phenylarsonic acid, was successful. The analyses of alloys with and without zirconium are described. The back-titration of the Trilon excess at a pH of 2.0 - 2.5 by an iron chloride solution in the presence of sulfosalicylic acid, was used for the determination of zirconium in magnesium alloys. Mg, Ag, Cd, Zn, Al, Mn, Nd, La, and Pr do not interfere, while titration is found to be impossible in the presence of Th. At a pH of 2.0-2.5 Trilon B and thorium form a complex which is destroyed by iron. An addition of iron chloride makes the pink color of the iron sulfosalicylate disappear quickly even without Trilon excess. This is also the case in the titration of thorium alone. Therefore, it is necessary that zirconium be precipitated by a 10% phenylarsonic acid solution in the presence of thorium in the alloy, the precipitation be dissolved after fusion, and the zirconium be determined by complexometric titration. Trilon has to be added to a strongly acid, hot zirconium solution containing approximately 20% of HCl (Table 2). For the complex formation, the solution then has to be boiled for some minutes. Solutions which are warm, but not necessarily hot, can be titrated. For one molecule of Trilon B one zirconium atom is used. The analysis is described in detail. There are

Card 2/3

Complexometric Method of Determining Thorium and Zirconium in Magnesium Alloys

S/032/60/026/008/013/046/XX
B020/B052

2 tables and 9 references: 4 Soviet, 3 US, 1 British, and 1 German.

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VOLODARSKAYA, R.S.; DEREVYANKO, G.N.

Complexometric determination of zirconium and thorium with xylenol orange. Zav.lab. 29 no.1:28-29 '63. (MIRA 16:2)
(Zirconium--Analysis) (Thorium--Analysis) (Xylenol orange)

VOLODARSKAYA, R.S.; DEREVYANKO, G.N.

Colormetric determination of scandium with xylenol orange. Zav.lab. 29 no.2:148-149 '63. (MIRA 16:5)
(Scandium—Analysis) (Xylenol orange)

L 36926-66 EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) RM/JH/JD

ACC NR: AP6012214 SOURCE CODE: UR/0032/66/032/004/0413/0413

AUTHOR: Volodarskaya, R. S.; Kanayev, N. A.; Derevyanko, G. N.

ORG: none

TITLE: Complexometric determination of indium in magnesium alloys

SOURCE: Zavodskaya laboratoriya, v. 32, no. 4, 1966, 413

TOPIC TAGS: quantitative analysis, indium, magnesium containing alloy

ABSTRACT: The article describes a complexometric titration method for the rapid determination of indium in magnesium alloys containing zirconium and rare earth elements. Three separate schemes are described for the analysis. Most reliable and accurate results are obtained by the direct titration of indium at a pH of 2-2.5 in the presence of metallic indicators 1-(2-pyridylazo)-2-naphthol) and ∝-(2, 4-dioxyphenylazo)-2-pyridine. Introduction of sodium fluoride into the solution eliminated the effect of zirconium by the formation, under these conditions, of fluoride complexes and complexes of the rare earth elements which fall out in the form of difficultly soluble fluorides. Comparative experimental results are given in a table. Orig. art. has: 1 table.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 002

Card 1/1

NOVIKOV, A.K.; MASHUKOV, V.I.; CHERNOV, S.F.; NIKOLAYEV, V.P.; VOLODARSKAYA, Sh.G.

Relation of the line of least resistance to the borehole diameter in mining operations. Vzryv. delo no.55/12: 239-244 '64. (MIRA 17:10)

VOLOBRINSKIY, S.D., kand.tekhn.nauk, dotsent; ZAIKA, A.A., kand.ekonom. nauk, dotsent

A scientific and technical conference on present trends and the technological and economic calculation methods in designing industrial power distribution networks. Elektrichestvo no.3: 94-96 Mr '64. (MIRA 17:4)

VOLCBRINSKIY, T. D.

Electric Measurements

Method of determining the electric load of industrial enterprises. Prom. energ., No. 1, 1952

Monthly List of Russian Accessions, Library of Congress, March 1952. UNCLASSIFIED.

VOLOBRINSKIY, S. D.

USSR/Electricity - Electric Traction Sep 52
Railways

"Conference-Seminar on Advanced Engineering on Electrified Railroads," S. D. Volobrinskiy, K. K. Sheleshkov, Candidates Tech Sci

"Elektrichestvo" No 9, pp 92, 93

More than 350 persons participated in the 2d conference-seminar on this subject, held early in May at the LIIZhT (Leningrad Inst of Railway Transport Engineers imeni Obraztsov). M. R. Bartskiy (Riga Elec Mach-Bldg Plant) reported on the

232T64

results of tests of the VL-22m elec locomotive series. A. Ye. Alekseyev (LIIZhT) and A. A. Pogosov (Novocherkassk Elec Locomotive Construction Plant) reported on the plans for a new 8-axle locomotive for trunk lines.

232T64

VOLOBRINSKIY, S.D.

VOLOBRINSKIY, S.D., kandidat tekhnicheskikh nauk, dotsent

Calculating short circuits in traction networks. Sbor. LIIZHT no.145:9-17 '53. (MLRA 8:10)
(Electric railroads) (Short circuits)

Volobrinskiy, S.D.

AID P - 629

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 33/35

Authors : Volobrinskiy, S. D., Kand. of Tech. Sci., Dotsent and Zvezdkin, M. N., Eng., Leningrad

Title : I. Ya. Ryshkovskiy and K. G. Kuchma: "Traction Substations", 487 pp., 1953 (Bibliography)

Periodical : Elektrichestvo, 8, 94-95, Ag 1954

Abstract : An extensive review of the book with some criticism is presented.

Institution : Leningrad Institute of Engineers of Railroad Transportation

Submitted : No date

VOLOBRINSKIY, S.D., kandidat tekhnicheskikh nauk, dotsent.

Calculation of the short-circuit current in a traction network taking account of the active resistance of the supply network. Sbor.LIIZHT no.149:54-72 '55. (MLRA 9:6)
(Electric railroads)

VOLOBRINSKIY, S.D.

AID P - 2019

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 23/31

Authors : Volobrinskiy, S. D., Kand. of Tech. Sci., Dotsent, Zvezdkin, M. N., Eng., Leningrad

Title : Book Traction Substations (Book Review by S. D. Volobrinskiy and M. N. Zvezdkin, this journal, No.8, 1954) (Discussion)

Periodical : Elektrichestvo, 4, 82-83, Ap 1955

Abstract : The authors repeat their previous criticisms of this book. They point out, for example, that some of the illustrations in the book were taken from out of date foreign literature. They sustain their original criticism and evaluate the book as not corresponding to the requirements of a textbook for higher institutes of learning.

Institution: Leningrad Institute of Engineers of Railway Transportation

Submitted : No date

VOLOBRINSKIY, S. D.

CONDUCTION

"Investigation of the Resistance of Steel Conductors" by Candidate of Technical Sciences, S. D. Volobrinskiy, Leningrad Institute of Engineers of Railroad Transport, Vestnik Elektropromyshlennosti, No. 5, May 1957, Pages 51 -- 52.

Steel wires are used frequently in Russia, particularly for rural electrification and for railroad signaling and other circuits of low load density. The resistance of electric wires fluctuates greatly with the chemical composition and the mechanical properties of the wires, their tension, etc. These fluctuations are discussed in this article.

Card 1/1 - 10 -

VOLOBRINSKIY, Sergey Davidovich; KAYALOV, Georgiy Mikhaylovich; KLEYN, Petr Nikolayevich; MESHEL', Boris Solomonovich; SYROMYATNIKOV, I.A., prof., retsenzent; KNYAZEVSKIY, B.A., dots., retsenzent; GRODSKIY, S.Ye., red.

[Electrical loads of industrial enterprises] Elektricheskie nagruzki promyshlennykh pred"iiatii. [By] S.D.Volobrinskii i dr. Moskva, Izd-vo "Energiia," 1964. 303 p. (MIRA 17:8)

L 27947-66

ACC NR: AP6017709 SOURCE CODE: UR/0105/66/000/001/0086/0086

AUTHOR: Avilov-Karnaukhov, B. N.; Bol'sham, Ya. M.; Venikov, V. A.; Volobrinskiy, S. D.; Yermilov, A. A.; Konstantinov, B. A.; Knyazevskiy, B. Ye.; Minin, G. P.; Miller, G. R.; Mukoseyev, Yu. L.; Petrov, I. I.; Serbinovskiy, G. V.; Syromyatnikov, I. A.; Fedorov, A. A.; Kholmskiy, G. V.; Shagalov, A. S.; Chilikin, M. G.

ORG: none

TITLE: Prof. Georgiy Mikhaylovich Kayalov (on his 60th birthday)

SOURCE: Elektrichestvo, no. 1, 1966, 86

TOPIC TAGS: academic personnel, electric engineering personnel, electric equipment

ABSTRACT: In 1929, G. M. Kayalov completed the electrotechnical department of the Mechanical Faculty of the Novocherkassk Polytechnical Institute. Until 1947, he worked in the planning department of the Rostov Division of the All-Union Electrotechnical Union. In this time, he rose to the position of Chief Engineer. He directed the planning of a large number of important pieces of electrical equipment for various projects. He was active in the postwar restoration of many important industrial enterprises. He is the author of almost 70 published works, and has made a great contribution to modern, scientifically based methods of design and analysis of electrical loads for industrial equipment. He is on a number of commissions and in many scientific and technical societies. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

Card 1/1 BLG UDC: 621.34

L 22578-66

ACC NR: AP6012975 SOURCE CODE: UR/0094/65/000/009/0043/0043

AUTHOR: Bol'sham, Ya. M.; Vinogradov, A. A.; Volobrinskiy, S. D.; Geyler, L. B.; Grudinskiy, P. G.; Dolginov, A. I.; Zil'berman, R. I.; Kazak, N. A.; Kletenik, B. I.; Knyazevskiy, B. A.; Livshits, D. S.; Mel'nikov, N. A.; Minin, G. P.; Mukoseyev, Yu. L.; Nayfel'd, M. R.; Petrov, I. I.; Ravin, V. I.; Samover, M. L.; Serbinovskiy, G. V.; Syromyatnikov, I. A.

ORG: none

TITLE: Lev Veniaminovich Litvak (on the occasion of his 60th birthday)

SOURCE: Promyshlennaya energetika, no. 9, 1965, 43

TOPIC TAGS: electric engineering personnel, electric power engineering

ABSTRACT: The noted specialist of industrial power production, Candidate of Technical Sciences, Docent of the Correspondence Power Institute Lev Veniaminovich LITVAK began his engineering activity at the Moscow Association of State Electric Stations in 1929. Later he became one of the coauthors of all the "Directives for the increase of the power factor" issued in 1954, 1955, and 1961. He published 70 scientific papers. For his successful activities in defense industries during World War II he was decorated by "Znak Pocheta." After the war he concentrated on scientific-pedagogical work and in recent years worked actively in

Card 1/2

L 22578-66

ACC NR: AP6012975

the Teaching-Methodological Commission of the Ministry of Higher and Intermediate Special Education USSR, for the specialty "Electrical supply to industrial enterprises and cities." Orig. art. has: 1 figure. [JPRS]

SUB CODE: 05, 10, 09 / SUBM DATE: none

Card 2/2 BK

VOLOBRINSKIY, S.D., kand.tekhn.nauk

Devote more attention to the conditions of electric power consumption. Prom. energ. 20 no.7:11-12 Jl '65.
(MIR: 18:12)

OGORODNOV, S.I., inzh.; KAYALOV, G.M., doktor tekhn. nauk; GRODSKIY, S.Ye., inzh.; VOLOBRINSKIY, S.D., kand. tekhn. nauk

Methods for calculating the electrical loads of industrial enterprises. Prom. energ. 20 no.5:33-42 My '65. (MIRA 18:7)

1. Gor'kovskiy avtomobil'nyy zavod (for Ogorodnov). 2. Novocherkasskiy politekhnicheskiy institut (for Kayalov). 3. Gosudarstvennyy institut po proyektirovaniyu traktornoy promyshlennosti i sel'skokhozyaystvennogo mashinostroyeniya (for Grodskiy).

VOLOBRINSKIY, S.D.; KAYALOV, G.M.; KLEYN, P.N.

Reply to D.S.Livshits's remarks on the discussion of the methodology for determining the loses of industrial electrical distribution networks of plants. Elektrichestvo no.5:88-89 My '65. (MIRA 18:6)

VOLOBRINSKIY, S.D., kand.tekhn.nauk, dotsent (Leningrad); PIKIN, P.N., inzh. (Leningrad)

Determination of the electrical loads of industrial enterprises. Elektrichestvo no.3:90-92 Mr '54. (MLRA 7:4)

VASIL'YEV, I.G., inzh.; VOLOBRINSKIY, S.D., kand. tekhn. nauk;
GUSEV, N.P., inzh.

Study of the heat resistance of contact wires. Vest. elektroprom.
34 no.3:45-49 Mr '63. (MIRA 16:8)

(Electric railroads—Wires and wiring)

VOLOBRINSKIY, S.D., kand.tekhn.nauk, dotsent; KLEYN, P.N., inzh.

"Electric power supply of industrial enterprises" by A.A, Fedorov. Reviewed by S.D.Volobrinskii, P.N.Klein. Elektrichestvo no.1:94-96 Ja '62. (MIRA 16:2)
(Electric power distribution)
(Fedorov, A.A.)

KIZEVETTER, Ye.N.; KLEYN, P.N.; KHARCHEV, M.K.[deceased]; VOLOBRINSKIY, S.D.; GRODSKIY, S.Ye.; YERMILOV, A.A.; KAYALOV, G.M.; LIVSHITS, D.S.; MAKSIMOV, A.A.; MESHEL', B.S.; MUKOSEYEV, Yu.L.; OGORODNOV, S.I.; ROZENBERG, V.A.; SHRAYBER, L.G.; ZALESSKIY, Yu.Ye., retsenzent; IOKHVIDOV, E.S., retsenzent; FEDOROV, A.A., retsenzent; SAVEL'YEV, V.I., red.; LARIONOV, G.Ye., tekhn. red.

[Temporary instructions for determining the electrical loads of industrial enterprises] Vremennye rukovodiashchie ukazaniia po opredeleniiu elektricheskikh nagruzok promyshlennykh predpriiatii. Moskva, Gosenergoizdat, 1962. 45 p. (MIRA 16:2)

1. Russia (1923- U.S.S.R.) Glavnoye energeticheskoye upravleniye. 2. Leningradskoye otdeleniye Gosudarstvennogo proyektnogo instituta tyazheloy promyshlennosti (for Kizevetter, Kleyn, Kharchev). 3. Komissiya po elektricheskim nagruzkam Nauchno-tekhnicheskogo obshchestva energeticheskoy promyshlennosti (for Volobrinskiy, Grodskiy, Yermilov, Kayalov, Livshits, Maksimov, Meshel, Mukoseyev, Ogorodnov, Rozenberg, Shrayber). (Electric power distribution)

VOLOBRINSKIY, Sergey Davidovich, kand. tekhn. nauk; KUDRYAVTSEV, Mikhail Vasil'yevich, kand. tekhn. nauk, dots.; STEPANOV, Vladimir Nikolayevich, prof.; KOLESOV, D.S., inzh., retsenzent; RYSHKOVSKIY, I.Ya., kand. tekhn. nauk, retsenzent; NECHAYEV, N.A., kand. tekhn. nauk, retsenzent; ZASLAVSKIY, V.I., inzh., retsenzent; ZUBCHENKO, V.V., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Electrical networks and power systems]Elektricheskie seti i energosistemy. Moskva, Transzheldorizdat, 1962. 313 p. (MIRA 15:10)
(Electric lines)
(Electric power distribution)

VOLOBRINSKIY, S.D., kand.tekhn.nauk, dotsent

In the Commission on Electrical Loads of Industrial Enterprises. Izv. vys. ucheb. zav.; elektromekh. 3 no.6:146-147 '60. (MIRA 15:5)
(Electric power distribution--Congresses)

KOZLOV, Vladimir Alekseyevich; VOLOBRINSKIY, S.D., red.; ZHITNIKOVA, O.S., tekhn. red.

[Municipal closed-loop electric networks] Gorodskie zamknutye elektricheskie seti. Moskva, Gos. energ. izd-vo, 1961. 238 p. (MIRA 14:8)

(Electric networks) (Electric power distribution)

8(6) SOV/143-59-2-2/19

AUTHOR: Volobrinskiy, S.D., Docent, Candidate of Technical Sciences

TITLE: The Power Supply of Consumers Located Along RR Lines, Electrified by Single-Phase Current of Industrial Frequency (Elektrosnabzheniye lineynykh potrebiteley pri elektrifikatsii zheleznykh dorog na odnofaznom toke promyshlennoy chastoty)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 2, pp 4-13 (USSR)

ABSTRACT: The author investigates aspects of using 50-cycle, single-phase current for the electrification of RR lines. One of the most important advantages is that track-side RR facilities and neighboring agricultural and industrial enterprises may be supplied with electricity. It was established by experience and by calculations that the power consumption of track-side facilities amounts to 0.6-1.5 kw/km without workshops of intermediate stations, and up to a maximum of 10 kw/km with the latter. According to data of the

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The Power Supply of Consumers Located Along RR Lines, Electrified by Single-Phase Current of Industrial Frequency

Leningrad laboratory of ENIN AN SSSR, the load created by agricultural and industrial enterprises will be around 200 kw/km. Taking into consideration that the load on a busy RR line amounts to 400-500 kw/km (with the introduction of the N-60 locomotive this value will be still higher), there is no problem encountered in supplying track-side facilities. The load of agricultural and small industrial enterprises is comparable by its magnitude to the load created by electric trains and must be taken into consideration when selecting the capacities and suspensions of transmission lines. The author explains the principal results of investigations of these problems conducted by the Kafedra elektrosnabzheniya LIIZhT (Chair of Electric Power Supply LIIZhT). First, the author explains three possible versions for supplying three-phase consumers, as shown by figure 1. One system contains an additional

conductor for the second phase, while the rails are used for the third phase. This system was called K-R-D (kontaktnaya podveska - rel'sy - dopolnitel'-nyy provod = contact wire-rails - additional conductor). This system is used on the experimental section Ozherel'ye - Pavelets and will be introduced to other lines operating on alternating current. Candidates of Technical Sciences N.V. Bokovoy and S.M. Rozhkov suggested independently from each other using different phases for the contact wires of a double-track RR line, since this system provides a better load distribution than the first one. S.M. Rozhkov developed the third system and suggested changing the phases used for the contact wire at regular intervals. This system is also advantageous from the aspect of load distribution, but it was not considered, because three-phase current may be obtained only at those points, where two sections with

The Power Supply of Consumers Located Along RR Lines, Electrified by Single-Phase Current of Industrial Frequency

different phases meet. The asymmetric voltage which depends on the parameters of track network was one of the principal problems connected with the power supply of consumers located near the RR line. Since the existing methods for calculating these parameters (for example, the method of Candidate of Technical Sciences K.A. Parfenov) does not permit determination of the necessary data, new investigations of these problems had to be conducted. The author describes these investigations for which also a static model was used. The researchers of the Chair of Electric Power Supply, N.P. Gusev and N.V. Bokovoy participated in these investigations. The author mentions briefly the experimental investigations conducted in summer 1957 on the RR line section Ozherel'ye-Pavelets, where the K-R-D sytem was used with three, three-phase power taps. The investigations were performed by workers of LIIZhT and VIESKh. Based on

The Power Supply of Consumers Located Along RR Lines, Electrified by Single-Phase Current of Industrial Frequency

these investigations, the author comes to the following conclusion: 1) The power supply of consumers located along, and in the vicinity of a RR line, electrified with single-phase current of industrial frequency, may be performed either by providing an additional conductor or, in case of double-track RR lines, by using different phases for the contact wires. 2) The voltage asymmetry for track-side consumers, caused by the load of electric locomotives, is considerable with the K-R-D system. The voltage asymmetry factor exceeds the permissible magnitude of 5% for high traction loads and low loads of track-side consumers. The asymmetry is reduced by a symmetric, three-phase load, by a reduction of the traction load and by increasing the resistance (reduction of the cross-section) of the additional phase conductor. 3) For reducing the asymmetry of the voltages, the phase sequence must be K-R-D when using an ad-

The Power Supply of Consumers Located Along RR Lines, Electrified by Single-Phase Current of Industrial Frequency

ditional conductor. 4) The cross-section of the additional conductor must be selected according to the permissible heating of the latter and not according to the economic current density. The voltage losses in the additional conductor should have a magnitude being close to the magnitude of average voltage losses in the contact wire and the rails. 5) The asymmetry, caused by electric locomotives on double-track RR lines, where different phases are used for each track, is lower than the asymmetry of the K-R-D system, if the load is approximately equal on both tracks. The asymmetry is higher, if the load on one track is reduced. 6) The latter system has engineering and economic advantages compared to the K-R-D system, although there are some constructional difficulties. This system may be used successfully on double-track RR lines with a constant traffic volume.

Card 6/7 7) Calculations showed that with either system, con-

The Power Supply of Consumers Located Along RR Lines, Electrified by Single-Phase Current of Industrial Frequency

tact wire TF-100 and cable TSM-100 (or BM-70) may be used to supply consumers located along the RR line with power within the limits of 100 kva/km. There are 6 graphs, 1 diagram, 1 table and 5 Soviet references.

ASSOCIATION: Leningradskiy institut inzhenerov zheleznodorozhnogo transporta - LIIZht (Leningrad Institute of RR Engineers)

PRESENTED: Kafedra elektrosnabzheniya zheleznykh dorog (By the Chair of Electric Power Supply of the RR Lines)

SUBMITTED: August 11, 1958

VASIL'YEV, I.G., inzh.; VOLOBRINSKIY, S.D., kand.tekhn.nauk, dots.; GUSEV, N.P., inzh.; MOLOSNOV, N.F., inzh.

Automatic voltage regulators used in separating capacity from a.c. traction networks. Elek. i tepl.tiaga 2 no.4:9-11 Ap '58. (MIRA 12:3)

(Voltage regulators)
(Electric railroads--Wires and wiring)

8(6) SOV/112-59-2-2792

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, p 73 (USSR)

AUTHOR: Volobrinskiy, S. D.

TITLE: Experimental Investigation of Resistance of Single-Wire Steel Conductors (Eksperimental'noye issledovaniye soprotivleniy odnoprovolochnykh stal'nykh provodov)

PERIODICAL: Sb. Leningr. in-ta zh.-d. transp., 1957, Nr 155, pp 150-159

ABSTRACT: Bibliographic entry.

Card 1/1

VOLOBRINSKIY, S.D.

Scientific and technical conference on methods of determining loads and controlling voltage of electrical networks in industrial plants. Prom.energ. 12 no.10:36-38 O '57. (MIRA 10:10)
(Electric networks)

AUTHOR: Volobrinskiy, S.L., Candidate of Technical Sciences (Leningrad Institute of Railway Transport Engineers).

TITLE: Investigation of the resistance of steel conductors. (Issledovaniye soprotivleniy stal'nykh provodov.)

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the Electrical Industry), 1957, Vol. 28, No. 5 pp. 51 -.52 (U.S.S.R.)

ABSTRACT: Steel wires are used in agricultural transmission lines, in railway track circuiting lines and in lightly-loaded lighting circuits. This article gives the results of investigations into the resistance of steel conductors to 50 c/s a.c. The tests were made on 4 specimens of wire type Zh-5, 5 mm in diameter and 15 metres long taken from different deliveries. The results of chemical analysis are tabulated and show that three of the four specimens meet the requirements for telegraph wires. The resistance values are also tabulated and it is shown that three of the four specimens meet the standard requirements. In addition to resistance, measurements were made of the impedance and internal reactance of the wire, the results are given for four specimens under a tension of 380 kg. Two of the specimens were also tested at different tensions and the results show that the influence of tension on their resistance and impedance is very great. For example, with a current of 6 amps the impedance is reduced from 16.3 ohms per kilometre without tension to 13.9 ohms per kilometre with a tension of 250 kg. The work that has been done shows that it

Investigation of the resistance of steel conductors. (Cont.) 424

is necessary to devise a standard for single strand steel conductors for the transmission of electric power. This standard should lay down the tensile strength of the material and its electrical characteristics including the maximum value of resistance for a given current and tension.

3 figures, no literature references.

VOLOBUYEV, A. (Ryl'sk, Kurskaya oblast')

Negligence led to fire. Pozh.delo 6:19 Mr '60. (MIRA 13:6)
(Rylsk--Fires and fire prevention)

VOLOBUYEV, A., delegat XII s"yezda profsoyuzov.

Automation and mechanization will transform our work. Okhr. truda i sots. strakh. no.4:60-62 Ap '59. (MIRA 12:8)

1.Predsedatel' zavodskogo komiteta Altayskogo traktornogo zavoda im. M.I. Kalinina, Rubtsovsk.
(Altai Territory--Tractor industry--Hygienic aspects)

[redacted]

VOLGBUYEV, B.

CA: 35-9718/1

TERENIN, A. N., YAKOVKIN, N. and VOLGBUYEV, B.
Acta Physicochim. URSS 12, 617-36 (1940) (in English)
Spectral investigation of chemical processes in organic compounds at low temperatures.

[redacted]

VOLOSHIN, B.

A. [illegible]IN, Uchenye Zapiski Leningrad. Gosudarst Univ. No. 120, Ser. Fiz. Nauk, No. 7, 3-27, 1949

VOLOBUEV, B.

Spectral study of the association of benzaldehyde molecules at low temperatures. A. Terenin, N. Yakovkin, and B. Volobuev (Leningrad State Univ.). Uchenye Zapiski Leningrad. Gosudarst. Univ. No. 120, Ser. Fiz. Nauk, No. 7, 3-27 (1949).-- BzH was chosen for an investigation of the fluorescence in the adsorbed state on account of its discrete fluorescence spectrum in the visible; in the gaseous state, it consists of 4 maxima, distant by the vibration frequency of the C=O group, 1730 cm. $^{-1}$. Thin layers of BzH were evapd. and condensed onto carrier surfaces of Cd, Bi, and Sb, or of NaI and TlI, kept at -180°. Adsorption undoubtedly takes place at the C=O group, whereas light is adsorbed in the ring. The amt. of BzH in the adsorbed layer, necessary for the fluorescence to be observable, is of the order of several hundreds of A. units, i.e. of several tens of mol. layers. By comparison with the amt. necessary for observation of the fluorescence of the vapor, about 10-mol. layers on a surface should be sufficient; the discrepancy is attributed to the roughness of the carrier surface. (1) The fluorescence spectrum of BzH on well-outgassed Bi, Cd, or Sb (Spectrum A) is skyblue, and differs from that of the vapor in the shift of the peaks to longer waves, and by the change of the intermax. distance (i.e. the vibration frequency of the C=O group) from 1730 to 1560 cm.$^{-1}$. Proof that this change is due, not to an effect of the metal carrier surface, but to assocn. of BzH mols. in the cryst, adsorbed layer, is provided by the independence of spectrum A of the nature of the carrier metal and of the thickness of the adsorbed layer, and, further, by the change of the spectrum on simultaneous adsorption of BzH and H_2O. The intensity increases considerably and the fluorescence becomes bright blue (spectrum B). This spectrum includes 3 maxima, the positions of which coincide with those of gaseous BzH, and is characterized by a relatively long afterglow of about 20 sec., as compared with 5-10 sec. for spectrum A. The metal base has no influence on that phenomenon.

Hydrobenzoin in an adsorbed layer gave a green spectrum with a max. at about 5400A., which should appear only in comds. with a C=O group; it must, consequently, be concluded that this emission belongs to benzoin dild. by an excess of hydrobenzoin. Benzil gives green fluorescence, with a broad max. at 5600 A. Oxidation products of BzH, e.g. the hydroperoxide BzOOH, gave only sky-blue fluorescence, and so did Bz_2O. In conclusion, the spectrum C is attributed definitely to benzoin. The conversion of adsorbed BzH to benzoin takes place on simple heating to -20°, as is prevented if the BzH mols. are sepd. by intervening H_2O mols. (3) On NaI, the fluorescence of BzH is faintly green, white, or blue-green, and becomes sky-blue only in thick layers or in the presence of H_2O; this fluorescence disappears rapidly under the action of ultraviolet. On TlI, the spectrum is of type B; green fluorescence is observed in thin layers, but its max., at 5500A., is different from that (5200A.) of spectrum C. (4) Types A and B are excited in the range 3300-2000A., with a max. at 2800-2200 A.; the excitation range of type C is about the same, but the max. is somewhat narrower, 2700-2200A. The fluorescence of BzMe is excited in a narrower range, 2900-2050A., with a max. at 2800-2150A. (5) Type B goes over into type C on 15-min. irradiation with ultra-violet. N. Thon

VOLOBUYEV, O.P.

Over-all mechanization and automation of operations in landing points. Mekh.i avtom.proizv. 14 no.12:56-58 D '60. (MIRA 13:12)
(Lumbering--Technological innovations) (Automation)

AUTHOR: Volobuyev, G.P., Engineer

SOV-110-58-7-4/20

TITLE: End-Type Motor Grabbing Device TMG-TsNIIME for Handling Round Timber (Tortsovyy motornyy greyfer TMG-TsNIIME dlya kruglogo lesa)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 7, pp 12-14 (USSR)

ABSTRACT: Experience has shown that jib cranes cannot accomplish the task of complex mechanization in timber storing and loading, as 50-60% of the working time is wasted on manual operations. Now TsNIIME has designed a face-loading motor grabbing device, TMG-TsNIIME. An experimental model has been constructed by the Uzlovaya Plant of the Tula Sovnarkhoz). The main parts of the TMG-TsNIIME device are: 1) the frame, 2) two vertical claws, 3) the stopper, 4) the electromagnets, 5) the timber cleaver, 6) driving-gear, 7) two electric engines and two suspended sleeve pieces, 8) two suspended supply main cables and 9) two suspended brackets for the feeding device of the stopper electromagnets. The lifting capacity is from 2 to 4 cu m, the capacity of the electric motors - 3.4 kw. At present, TsNIIME is developing a bigger model of the same type.

1. Equipment--Materials handling--Development

Card 1/1

VOLOBUYEV, G.P., inzhener.

Optimum parameters of cantilever gantry cranes for lumberyards. Mekh thur.rab.10 no.11:13-16 N '56. (MLRA 10:1)
(Lumberyards) (Cranes, derricks, etc)

VOLOBUYEV, G.P., inzhener.

Lightweight portable electric mechanical winch model PLV-1. Mekh. trud.rab. 10 no.5:41-42 My '56. (MLRA 9:8)
(Winches)

VOYEVODA, D.K.; VOLOBUYEV, G.P.; NOVOSEL'TSEV, N.V., red.; FEDOROV, V.M., red. izd-va; BACHURINA, A.M., tekhn. red.

[KKU-7.5 gantry crane for loading operations in lumber storage areas] Konsol'nokozlovoi kran KKU-7,5 dlia pogruzochnykh rabot na lesnykh skladakh. [Moskva] M-vo lesnoi promyshl. SSSR [1957] 12 p. (MIRA 11:10)

1. Moscow. Vsesoyuznaya promyshlennaya vystavka. (Cranes, derricks, etc.) (Lumbering--Machinery)

VOLOBUYEV, G.P.; MIRONOV, Ye.M.; KARAVASHKIN, S.I., red.; PETRENKO, V.M., tekhn. red.

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TITLE: Influence of Niobium on the Temper Brittleness of Manganese Steel (Vliyaniye niobiya na otpusknuyu khrupkost' margantsovistoy stali)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotke Metallov, 1959, Nr 2, pp 28 - 33 (USSR)

ABSTRACT: Results published on the influence of niobium on manganese steel are contradictory (Refs 1-5). Also, no literary data are available on the influence of niobium on the type II temper brittleness. The steel used in the experiments was produced in a high-frequency furnace under atmospheric pressure and also in vacuum. The chemical composition of some of the steels used in the experiments are entered in Tables 1 and 2. In these, the manganese content was 1.62-2.62, the niobium contents were between 0.00 and 1.30%. The chemical composition of the steels produced in vacuum (first group) differs somewhat from that of the steel produced at atmospheric pressure (second group), particularly as regards the phosphor content. Ingots from

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both groups were forged into rods of square cross-section, from which standard impact specimens were produced. For hardening, the specimens were heated in a salt bath to 850 °C (first group) and 880 °C (second group) for 20 min and, following that, they were quenched in oil. The hardened specimens were tempered for two hours at various temperatures between 350 and 600 °C and then one batch was cooled in the furnace and an equal batch was cooled in water. After this heat treatment, they were subjected to impact bending tests. The results of these tests were used for determining the coefficients of susceptibility to temper brittleness (Tables 3-4). To obtain a more complete picture of the influence of niobium, impact tests were also carried out at low temperatures, i.e. 0, -40 and -80 °C on specimens quenched from 850 °C and tempered at 600 °C for 2 hours. Electron microscope investigations have shown that all the steel specimens cooled in water after tempering have a smaller surface of division of the phases than the specimens cooled in the furnace after tempering. This is attributed to the fact that more carbide particles can be rejected in specimens cooled in

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the furnace than in specimens cooled in water. The difference in the total size of the surface of division of the phases in specimens cooled in water and those cooled in the furnace is great for steel without niobium (which is sensitive to temper brittleness). However, for equal steels with niobium, which are not sensitive to temper brittleness, this difference is considerably smaller. The authors believe that for evaluating correctly the influence of small additions of alloying elements on the temper brittleness, it is necessary to know whether a particular alloying addition is horophilic or horophobous in the system of a given steel. Relative to nickel, niobium is horophilic and therefore it hardly reduces the temper brittleness of chromium-nickel steels and of other nickel-containing steels. However, in iron with a low manganese content, niobium is horophobous and this is the probable reason why it reduces the temper brittleness of manganese steel.

On the basis of the obtained results, the following

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